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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,928	03/30/2004	Tomomi Tateishi	1330-0139PUS1	2905

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EXAMINER	
SUCH, MATTHEW W	

ART UNIT	PAPER NUMBER
2891	

NOTIFICATION DATE	DELIVERY MODE
03/06/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/811,928	TATEISHI, TOMOMI	
	Examiner	Art Unit	
	MATTHEW W. SUCH	2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4 and 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 and 3 are objected to because of the following informalities: the phrase "(nm)" is unnecessary in the claim since the claim is directed towards a ratio and the units by which the Rmax and thickness are measured are irrelevant. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchet-Fincher (`315) in view of Nakaya (`176).

a. Regarding claims 1, 3, 27 and 29-30, the language of "such that said organic layer of said transfer material faces said first electrode", "to form a laminate" and "so that said organic layer is transferred onto said first substrate", the examiner notes that the recitations of "such that", "to form" and "so that" merely describe intended outcomes of the method steps of "applying heat and/or pressure" and "peeling said support", respectively. Language expressing the intended use/outcome/result of a specific step in a

method claim does not narrow scope of the method claim past the specific recited step. See MPEP § 2106 II C and MPEP § 2111.04.

Nevertheless, Blanchet-Fincher teaches a method for producing an organic electroluminescent device by using a transfer material (Element 12, 12', 13, 15) comprising at least one organic layer (Para. 0054-0055, 0083, for example) formed on a support (Element 14) of polyether sulfone (Line 3 of Para. 0042). The transfer material is superposed on a flat layer (Element 102a) formed on a first substrate (Element 102b) having a first electrode (Element 104) formed on the flat layer. The organic layer of the transfer material faces the first electrode on the first substrate (Fig. 6) and heat and/or pressure (Para. 0077 which references back to Para. 0063-0064, for example) is applied, forming a laminate (Fig. 6). The support is peeled from the laminate (Para. 0065, 0077-0078) so that the organic layer is transferred onto the first substrate via the first electrode (Fig. 7). The flat layer is, for example, an inorganic oxide or nitride or an adhesive (Para. 0085). After the transfer of the organic layer onto the first substrate via the first electrode, a second substrate (Element 120, 120a, 120b) having a second electrode (Element 114) formed thereon is laminated onto the organic layer on the first substrate (Fig. 8). Both the first and second substrates have a thickness of 25-250 microns (Para. 0084).

Blanchet-Fincher teaches that the organic layer is 100-5000 Angstroms (10-500 nm) thick (Para. 0074, for example), but does not teach that the first substrate and second substrate each have a maximum surface roughness Rmax of 0.0001-25%, based on the ratio of the surface roughness to the thickness of the organic layer.

However, Nakaya teaches forming substrates with electrodes for OLED devices having a maximum surface roughness Rmax of the first substrate of, for example, 2 nm (Col. 13, Lines 45-46, for example). It would have been obvious to one of ordinary skill in the art at the time the invention was made to produce the first substrate with a maximum surface roughness of 2 nm, for example, since the smooth substrate OLED devices have lower leakage currents and stable emission of light without the presence of dark spots (Nakaya Abstract; Col. 1, Lines 57-65; Col. 15, Lines 1-5, for example). Since Blanchet-Fuincher teaches that the organic layer is 10-500 nm thick (Para. 0074) and Nakaya teaches that Rmax is 2 nm, the ratio is 0.4-20% for each substrate. It has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or working ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

b. Regarding claim 28, while Blanchet-Fincher teaches that the first and second substrates are 25-250 microns thick, which are a suitable thickness for the transfer process, Blanchet-Fincher is silent regarding the thickness of the support. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a thickness of 25-250 microns for the support as well as the first and second substrates. One would have been motivated to do so since the thickness is suitable for the lamination process and the same equipment settings can be used for all substrates, such as for the roll-to-roll lamination disclosed (Para. 0071, for example). Furthermore, it would have been an obvious matter of design choice bounded by well known manufacturing

constraints and ascertainable by routine experimentation and optimization to choose these particular dimensions because applicant has not disclosed that the dimensions for the support are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using another dimension. Indeed, it has been held that mere dimensional limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Additionally, it has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or working ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchet-Fincher (`315) in view of Nakaya (`176) as applied to claim 27 above, and further in view of Mueller (`741).

Blanchet-Fincher teaches that the second substrate (Element 120) is the cathode side of the OLED device (Para. 0078, Fig. 8) and that the second electrode (Element 114) is connected to circuitry (Para. 0094). However, Blanchet-Fincher teaches that the second substrate materials

are plastics, which do not have a linear coefficient of thermal expansion of 20 ppm / degree Celsius or less.

However, Mueller teaches that the cathode (Element 12) side substrate (Element 11) of a laminated OLED device (Element 10) is silicon (Col. 6, Lines 35-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use silicon as the cathode side substrate in the device of Blanchet-Fincher as taught by Mueller. One would have been motivated to do so since the cathode side of the devices of both Blanchet-Fincher and Mueller are not required to be transparent (that is reserved for the anode side) and that silicon is a material used for making electrical circuits, which, in the device of Blanchet-Fincher are connected to the cathode (see Para. 0094). The linear coefficient of thermal expansion of silicon is 2.6 ppm / degree Celsius.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3-4 and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's arguments submitted on the Affidavit filed 15 December 2008 have been fully considered but they are not persuasive. The Applicant argues that the material of polyether sulfone produces unexpected results over polyethylene terephthalate. This is not persuasive. There is no evidence of record showing that these results were at the time the invention was made. Additionally, the results claimed by the Applicant are in direct contradiction to the

teachings of the specification which discloses that polyethylene terephthalate is actually a preferred material for the support over polyether sulfone (see Page 26, Lines 1-12).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW W. SUCH whose telephone number is (571)272-8895. The examiner can normally be reached on Monday - Friday 9AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Purvis can be reached on (571) 272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew W. Such/
Examiner, Art Unit 2891

/MWS/
2/27/09

/Douglas M Menz/
Primary Examiner, Art Unit 2891
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